

Alternative Treatment for Kids with ADHD

Researchers may have discovered a new treatment for children with attention-deficit-hyperactivity disorders (ADHD).

In a German study conducted at the University of Tübingen, researchers investigated the effects of self-regulation of slow cortical potentials in children with ADHD.

The researchers explained that slow cortical potentials are slow, event-related direct-current shifts of the electroencephalogram. Slow cortical potential shifts in the electrical negative direction reflect the depolarization of large cortical cell assemblies, reducing their excitation threshold. In the study, training was aimed at regulation of cortical excitation thresholds considered to be impaired in children with ADHD.

Electroencephalographic data from the training and the 6-month follow-up were reported, as were changes in behavior and cognition.

Twenty-three children with ADHD between the ages of eight and 13 years old received 30 sessions each. In addition to the neurofeedback sessions, children exercised during the third training phase to apply the self-regulation strategy while doing their homework.

The study found that after training, significant improvements in behavior, attention and IQ score were observed. All changes were found to be stable at six months follow-up after the end of training.

The study concluded that slow cortical potential feedback may be efficacious and in the absence of a control group, no causal relationship between observed improvements and the ability to regulate brain activity can be made. However, it was shown that good performance in self-regulation may predict clinical outcome. Researchers suggested that regulation of frontocentral negative slow cortical potentials affects the cholinergic-dopaminergic balance and allows children to adapt to task requirements more flexibly.

A previous study found a correlation between low serum free fatty acids and zinc serum levels in children with attention deficit hyperactivity disorder. Two other studies found that zinc supplements reduced hyperactive, impulsive and impaired socialization symptoms, but did not reduce attention deficiency symptoms. Zinc supplementation may be a more effective treatment for older children with higher body mass index (BMI) scores.